

REMARKS

Reconsideration of the application as amended is respectfully requested.

The Examiner's communication dated August 23, 2006 is acknowledged.

Claims 3 – 5, 7 – 10, 12 – 14, 16 – 20, 24 – 26, 28 – 31, 53 – 67, and 69 – 76 are pending. Claims 3 – 5, 7 – 10, 12 – 14, 16 – 20, 24 – 26, 28 – 31, 53 – 67, and 69 – 76 stand rejected for obviousness under 35 USC § 103.

By the present amendment, claims 4, 13, and 25 are cancelled and claims 5, 14, 26, 67, 75, and 76 are amended. After this amendment, claims 3, 5, 7 – 10, 12, 14, 16 – 20, 24, 26, 28 – 31, 53 – 67, and 69 – 76 are pending. The title is amended to more clearly identify the subject matter of the invention.

Rejections under 35 USC § 103 traversed

Claims 3, 7 – 10, 12, 16 – 20, 24, 26 – 31, and 53 – 57 stand rejected under 35 USC § 103 as being unpatentable over Peng et al. US 2002/0016075, in view of Liao et al. US 2005/0087513. Claim 27 was previously canceled and need not be discussed further herein.

The Examiner's postulated motivation for combining selected features of these two references is not found in any of the prior art of record. Thus, it appears that the Examiner is relying on facts within the Examiner's personal knowledge. Therefore, if these rejections are maintained, an affidavit under 37 CFR § 1.104(d)(2) is respectfully requested.

The Examiner correctly notes that Peng et al. fails to teach forming a sol-gel precursor material. The Examiner also correctly points out that Liao et al. teaches (in paragraph 20) forming an ITO film by vacuum deposition or sol-gel process. However, neither Peng et al. nor Liao et al. discloses or suggests applicants' method as claimed.

Claim 55 recites (emphasis added):

"A method comprising:

a) forming a layer of sol-gel material on at least a portion of at least one surface of a substrate, *the layer of sol-gel material being a precursor of a conductive material*;

b) *selectively modifying one or more material properties of at least a first portion of the formed layer of sol-gel material by selectively directing laser radiation on the first portion*; and

c) selectively removing at least a second portion of the formed layer of material."

The layer portion of claim 55 selectively modified by selectively directing laser radiation on the portion is not a conductive amorphous ITO layer as taught by Peng et al. or a conductive ITO film as taught in Liao et al. It is a layer of sol-gel material and a *precursor of a conductive material*. Neither Peng et al. nor Liao et al. teaches or suggests selectively directing laser radiation on a *portion of a film of sol-gel material* or on a *portion of a precursor of a conductive material*. Therefore, combining the teachings of Peng et al. and Liao et al. would not make applicants' invention as claimed. Applicants respectfully submit, therefore, that claims 3, 7 – 10, and 53 – 55 would not have been obvious to the person of ordinary skill at the time the invention was made, and respectfully request that these rejections be withdrawn.

Claim 56 recites (emphasis added): "A method of forming a thin film, comprising:

a step for forming a layer of sol-gel material on at least a portion of at least one surface of a substrate, *the layer of sol-gel material being a precursor of a conductive material*, and

a step for *selectively modifying one or more material properties of at least one portion of the formed layer of sol-gel material*."

The same argument as stated above for claim 55 applies equally to claim 56. Neither Peng et al. nor Liao et al. teaches or suggests selectively *modifying a portion of a film of sol-gel material* or a *portion of a precursor of a*

conductive material. Thus, again, combining the teachings of Peng et al. and Liao et al. would not make applicants' invention as claimed. Applicants respectfully submit, therefore, that claims 12, 16 – 20, and 56 would not have been obvious to the person of ordinary skill at the time the invention was made, and respectfully request that these rejections be withdrawn.

Similarly, claim 57 recites (emphasis added): "A transparent thin film electronic device, formed substantially by a process comprising:
forming one or more material layers on a substrate, *at least one of the material layers being a sol-gel precursor of a conductive material*;
selectively modifying at least a first portion of the sol-gel precursor of a conductive material; and
removing at least a second portion of the one or more material layers, wherein the at least a second portion comprises one or more non-annealed portions of said one or more material layers."

The same argument as stated above for claims 55 and 56 applies equally to claim 57. Neither Peng et al. nor Liao et al. teaches or suggests *selectively modifying a portion of a film of a sol-gel precursor of a conductive material*. Thus, again, combining the teachings of Peng et al. and Liao et al. would not make applicants' invention as claimed. Applicants respectfully submit, therefore, that claims 24, 26, and 28 – 31, and 57 would not have been obvious to the person of ordinary skill at the time the invention was made, and respectfully request that these rejections be withdrawn.

Claims 4, 5, 13, 14, 25, and 26 stand rejected under 35 USC § 103 as being unpatentable over Peng et al. US 2002/0016075, in view of Liao et al. US 2005/0087513, and further in view of Kijima, US 2004/0136891. Nevertheless, claims 4, 13, 25 are cancelled hereinabove and claims 5, 14, and 26 correspondingly amended to more clearly state and distinctly claim applicants' invention. Claims 5, 14, and 26 as amended all depend upon claims 55 – 57, discussed above. Therefore, for the same reasons stated above, applicants respectfully request that these rejections be withdrawn.

Claims 58 – 66 stand rejected under 35 USC § 103 as being unpatentable over Peng et al. US 2002/0016075, in view of Liao et al.

US 2005/0087513, and further in view of cited articles by Chung and Hosono. Claims 58 – 66 all depend upon claim 55, discussed above. Therefore, for the same reasons stated above for claim 55, applicants respectfully request that these rejections be withdrawn. Furthermore, motivations postulated by the Examiner for combining the laser irradiation variations of either Chung or Hosono with the teachings of Peng et al. and Liao et al., viz., that "different areas of the device will require electrodes of different crystallinity, resistivity and transparency" appear to be based on facts within the personal knowledge of the Examiner, as they are not found in the prior art of record. Therefore, if these rejections are maintained, an affidavit under 37 CFR § 1.104(d)(2) is respectfully requested. None of the claims 58 – 66 (or any of applicants' claims) includes a limitation reciting an electrode.

Claims 67 and 69 – 76 stand rejected under 35 USC § 103 as being unpatentable over Peng et al. US 2002/0016075, in view of the articles by Chung and Hosono. Applicants respectfully submit that these claims would not have been obvious at the time the invention was made, for the same reasons stated above for claims 55 – 66. Nevertheless, claims 67, 75, and 76 are amended herein to more clearly state and distinctly claim applicants' invention. Basis for the inserted limitations is found in the specification as filed (at least in paragraphs 12 – 15 and 23), and in claims 6, 15, 27, and 34 as originally filed. No new matter is added.

Applicants believe that claims 67 and 69 – 76 as amended are clearly further distinguished from the references individually and in combination and are therefore allowable. Therefore, applicants respectfully request that these rejections be withdrawn and that claims 67 and 69 – 76 as amended be allowed.

This response is believed to be fully responsive to each issue raised in the office action, but if the Examiner maintains any rejection, applicant would appreciate a more detailed explanation of precisely where in the references the combination is suggested and the relevant limitations are disclosed.

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Applicants expressly reserve the right to file divisional and/or continuation applications with any of the canceled or non-elected claims, or with similar claims, or with claims to any subject matter disclosed in the present application or incorporated by reference.

Respectfully submitted,

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